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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,564	11/03/2000	Rodric C. Fan	TRMB-2109	6675
70409	7590	06/22/2010	EXAMINER	
TRIMBLE NAVIGATION LIMITED C/O WAGNER BLECHER			HO, HUY C	
123 WESTRIDGE DRIVE			ART UNIT	
WATSONVILLE, CA 95076			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/705,564	Applicant(s) FAN, RODRIC C.	
	Examiner HUY C. HO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 17-26, 28, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 17-26, 28, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/14/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. In view of the Appeal Brief filed on 12/07/2009, PROSECUTION IS HEREBY REOPENED. The new ground(s) of rejection is made in view of Morita et al (US 5,864,753), McLellan (EP 0964514) and Lee et al. (US 6,374,177) and Ishikawa et al. (US Patent No. 5,640,696) are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Patrick N. Edouard/

Supervisory Patent Examiner, Art Unit 2617

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-2, 4-8, 17-18, 20-22, 25-26, 28 and 31-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al (US 5,864,753)** in view of **McLellan (EP 0964514)** and further in view of **Ishikawa et al. (US Patent No. 5,640,696)**.

Regarding claim 1, (Previously Presented) Morita teaches a location-specific frequency tuning system (see Morita, the abstract), comprising:

a location unit (Morita, figure 1, number 20, the navigation unit);

a wireless interface to a wide area network (Morita, figure 1, col 3 lines 5-30);

a user interface (Morita, figure 1, col 3 lines 5-30);

a mobile receiving unit tuned to receive a broadcast signal based on a selected frequency provided as input to the mobile receiving unit (Morita, col 2 lines 1-15, a radio receiver tunes to a broadcast radio station at desired frequencies); and

a frequency selection unit coupled to said mobile receiving unit (Morita, figure 1, col 3 lines 5-30, a radio receiver), said frequency selection unit receiving a current location from the location unit (Morita, figure 1, col 3 lines 5-30, the navigation unit), receiving tuning data comprising a set of frequencies of broadcast signals corresponding to different geographic regions through the wireless interface at the current location from a database on the wide area network (Morita, figure 1, col 3 lines 5-55), generating a menu comprising each of said plurality of arranged frequencies and descriptions of specific broadcast format information corresponding to each of said plurality of arranged frequencies (Morita, col 4 lines 15-40), outputting said menu to a user through said user interface (Morita, col 4 lines 15-45), selecting one of said plurality of arranged frequencies based on a user selection (Morita, col 4 lines 15-45, radio station frequencies are selected based on a user's desire), and tuning said mobile receiving unit to said selected arranged frequency (Morita, col 4 lines 15-45).

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Morita does not teach arranging frequencies by subject content categories. McLellan teaches organizing and arranging frequencies by subject content categories (see McLellan, figure 2, col 3 lines 7-35), thus it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Morita of a radio station tuning system by combining teachings of McLellan arranging frequencies by subject content categories, i.e., National Public Radio stations, News stations, Top 40 stations are arranged by categories in geo data, station identifiers and in frequencies orders, thus providing time convenience for radio station retrievals for a radio receiver using location determining information taught by McLellan (see McLellan, pp [1]-[7]).

Morita, as modified by McLellan, does not teach selecting frequencies from broadcast signals based on the strength. Ishikawa teaches receiving device receives broadcast frequencies based on sensitive levels of received frequencies (see Ishikawa, col 8 lines 5-13), therefore thus it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Morita, as modified by McLellan, by incorporating teachings of a receiving device tuning for FM broadcast frequency signals based upon the signals' sensitive levels or the signals' strengths to provide finer tuning to desired broadcasting stations for the roaming user while driving in different geographical areas (see Ishikawa, col 1 lines 5-67, col 2 lines 1-67, col 3 lines 1-25).

Regarding claim 17, (Previously Presented) Morita teaches a method of tuning location-specific frequency data in a mobile signal receiving unit using a frequency selection unit coupled to said mobile signal receiving unit (see Morita, the abstract), said method comprising:

receiving geographic position information from a location unit, said geographic position information identifying a present geographic position of said mobile signal receiving unit receiving tuning data from a remote database said tuning data comprising a set of frequencies of broadcast signals corresponding to different geographic frequencies (Morita, figure 1, col 3 lines 5-55);

receiving user-selected content category information (Morita, col 4 lines 15-45);

determining a plurality of reception areas in which said system is located based on said geographic position information and said tuning data (Morita, col 2 lines 15-30, col 3 lines 5-55);

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selecting localized content information from said arranged localized tuning data when said system moves to a new reception area among said plurality of reception areas (Morita, figure 1, col 3 lines 5-55), said selected localized content information comprising a plurality of localized content-specific frequencies corresponding to said user-selected content category information and said new reception area (Morita, figure 1, col 3 lines 5-55), and said selected localized content information further comprising a description of specific broadcast format information for each of said plurality of localized content-specific frequencies (Morita, col 2 lines 25-55, col 4 lines 47-67, col 5 lines 1-7);

generating a menu listing said selected localized content information (Morita, col 4 lines 15-40);

outputting said menu to a user through a user interface (Morita, col 4 lines 15-45);

prompting said user interface for a user selection (Morita, col 3 lines 48-67, col 4 lines 1-45);

selecting one of said plurality of localized content-specific frequencies based on a user selection (Morita, col 4 lines 15-45); and

tuning said mobile signal receiving unit to said selected localized content-specific frequency (Morita, col 4 lines 15-45).

Morita does not teach arranging frequencies by subject content categories. McLellan teaches organizing and arranging frequencies by subject content categories (see McLellan, figure 2, col 3 lines 7-35), thus It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Morita of a radio station tuning system by combining teachings of McLellan arranging frequencies by subject content categories, i.e., National Public Radio stations, News stations, Top 40 stations are arranged by categories in geo data, station identifiers and in frequencies orders, thus providing time convenience for radio station retrievals for a radio receiver using location determining information taught by McLellan (see McLellan, pp [1]-[7]).

Morita, as modified by McLellan, does not teach selecting frequencies from broadcast signals based on the strength. Ishikawa teaches receiving device receives broadcast frequencies based on sensitive levels of received frequencies (see Ishikawa, col 8 lines 5-13), therefore thus it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify

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teachings of Morita, as modified by McLellan, by incorporating teachings of a receiving device tuning for FM broadcast frequency signals based upon the signals' sensitive levels or the signals' strengths to provide finer tuning to desired broadcasting stations for the roaming user while driving in different geographical areas (see Ishikawa, col 1 lines 5-67, col 2 lines 1-67, col 3 lines 1-25).

Regarding claims 2, 18, (Previously Presented) The system of claims 1, 17, Morita, as modified by McLellan and Ishikawa, discloses the selected frequency is the transmission frequency of a frequency modulated broadcast station (see McLellan, pp [2]).

Regarding claim 4 , (Previously Presented) The system of claim 1, Morita, as modified by McLellan and Ishikawa, further discloses a user interface electrically coupled to receive from the frequency selection unit data arranged as radio signal content categories and to output a menu of categories to a listener (Morita, col. 4, lines 29-37).

Regarding claim 5, The system of claim 1, Morita, as modified by McLellan and Ishikawa further discloses wherein at least a portion of the menu is output on a visual display (Morita, col. 4, lines 39-43, col 5 lines 23-26).

Regarding claim 6, (Previously Presented) The system of claim 1, Morita, as modified by McLellan and Ishikawa, further discloses wherein at least a portion of the menu is audibly output by the interface (see Morita, col. 21-23).

Regarding claim 7, (Previously Presented) Morita, as modified by McLellan and Ishikawa, discloses a user interface electrically coupled to receive and relay to the frequency selection unit a user command to select a particular content category in an arrangement of radio signal content categories stored in the frequency selection unit (see McLellan, figure 2, col 3 lines 7-35).

Regarding claim 8, The system of claim 7, Morita, as modified by McLellan and Ishikawa, further discloses wherein the command is a verbal command (see Morita col. 3, lines 15-55).

Regarding claim 20 (Previously Presented), The method of claim 17, Morita, as modified by McLellan and Ishikawa, discloses wherein the tuning data is arranged by categories of content carried by radio signals (see McLellan, figure 2, col 3 lines 7-35).

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Regarding claim 21 (Previously Presented), The method of claim 20, Morita, as modified by McLellan and Ishikawa, further discloses the act of outputting to a user a menu of content categories available for the current position (Morita, col 4 lines 15-45);

Regarding claim 22 (Previously Presented), The method of claim 20, Morita, as modified by McLellan and Ishikawa, further discloses the act of receiving a command from a listener to select a particular content category (see Morita, col 3 lines 48-67, col 4 lines 1-45).

Regarding claims 25, 31, Method of claims 17, 1, Morita, as modified by McLellan and Ishikawa, further discloses wherein the location information is provided using global positioning system information (see Morita et al col. 3, lines 37-43).

Regarding claims 26, 32, Method of claims 17, 1, Morita, as modified by McLellan and Ishikawa, further discloses the communication unit transmitting the data to the base station via a vehicle telephone thus providing location information using cellular wireless communications system information (see Morita et al col. 3, lines 15-23).

Regarding claim 28, (Previously Presented) The method of claim 17, Morita, as modified by McLellan and Ishikawa, discloses wherein the localized tuning data is selected on a content category of a broadcast signal being received prior to a change in signal reception condition (see Morita, col 4 lines 1-67, col 5 lines 1-5, Ishikawa, col 8 lines 5-13).

4. **Claims 3, 19 and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morita et al (US 5,864,753)** in view of **McLellan (EP 0964514)**, **Ishikawa et al. (US Patent No. 5,640,696)** and further in view of **Lee et al. (US 6,374,177)**.

Regarding claims 3, 19 (Previously Presented) The system of claims 1, 17, Morita as modified by McLellan and Ishikawa, does not show the tuning data comprises satellite transmission radio frequencies. Lee teaches a radio receiving system having the capability of frequency modulation transmission frequencies (see Lee, figure 3, col. 10, lines 52-63, col. 11, lines 5-19, col. 12, lines 13-22), and satellite transmissions using satellite transmission frequencies (see Lee, col. 10, 49-59). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the

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invention was made to modify the combination of Morita, McLellan and Ishikawa with Lee to include the above use of satellite in order to provide personalized information services through available communication networks that cover a wide area such as frequency modulation, satellite and cellular communications as taught by Lee (see Lee, col 1 lines 5-67, col 2 lines 1-67).

Regarding claim 23, (Previously Presented) The method of claim 17, Morita as modified by McLellan and Ishikawa, teaches where said user-selected content category information is provided by a system user selecting one or more content categories (Morita, col 4 lines 5-45). Morita, modified by McLellan and Ishikawa, does not show tuning data is downloading via the Internet. Lee teaches and discloses internet radio for portable applications uses in an automobile enables providing navigational services to provide to a wireless communication device, and discloses data can be downloading from the Internet (see Lee, figure 1, col 5 lines 45-67, col 6 lines 1-65), therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the combination of Morita and McLellan and Ishikawa with Lee to have a wireless communication device downloading tuning data via the Internet as taught by Lee to provide new features and services of utilizing the Internet to fulfill users' desirable needs in a location-based services discussed by Lee (see Lee, col 1 lines 1-67, col 2 lines 1-67, col 3 lines 1-67).

Regarding claim 24, (Original) The method of claim 23, Morita as modified by McLellan, Ishikawa and Lee teaches wherein the user selects the one or more content categories via a World Wide Web (see Lee, col 7 lines 35-40, col 12 lines 20-35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huy C Ho/
Examiner, Art Unit 2617

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2617